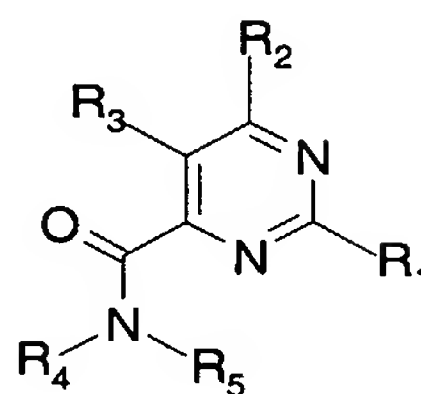


CLAIMS

1. The use of a compound of formula (1):



(I)

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wherein

- R<sub>1</sub> is optionally substituted C<sub>1</sub>-C<sub>6</sub>alkyl C<sub>2</sub>-C<sub>6</sub>alkenyl, or C<sub>2</sub>-C<sub>6</sub>alkynyl, or -NR<sub>6</sub>R<sub>7</sub>, -OR<sub>8</sub>, -SR<sub>9</sub> or halogen;
- R<sub>2</sub> is optionally substituted aryl or heteroaryl attached via a carbon atom;
- 10 R<sub>3</sub> is H; optionally substituted C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>2</sub>-C<sub>6</sub>alkenyl, C<sub>2</sub>-C<sub>6</sub>alkynyl, or C<sub>3</sub>-C<sub>7</sub> cycloalkyl, halogen; OH or OR<sub>10</sub>;
- R<sub>4</sub> is H, optionally substituted C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl, C<sub>3</sub>-C<sub>6</sub>alkynyl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, aryl or heteroaryl,
- R<sub>5</sub> is H or optionally substituted C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl, C<sub>3</sub>-C<sub>6</sub>alkynyl, or C<sub>3</sub>-C<sub>7</sub> cycloalkyl;
- 15 or R<sub>4</sub> and R<sub>5</sub> together form a 5 or 6-membered heterocyclic ring;
- R<sub>6</sub> is H or optionally substituted C<sub>1</sub>-C<sub>3</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl, C<sub>3</sub>-C<sub>6</sub>alkynyl, or C<sub>3</sub>-C<sub>7</sub> cycloalkyl;
- R<sub>7</sub>, R<sub>8</sub>, R<sub>9</sub> and R<sub>10</sub> are optionally substituted C<sub>1</sub>-C<sub>3</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl, C<sub>3</sub>-C<sub>6</sub>alkynyl, or C<sub>3</sub>-C<sub>7</sub> cycloalkyl
- or R<sub>6</sub> and R<sub>7</sub> together form a 5 or 6-membered heterocyclic ring;
- 20 and pharmaceutically acceptable salts and prodrugs thereof, in the manufacture of a medicament for the treatment or prevention of a disorder in which the blocking of purine receptors is beneficial.

2. The use as claimed in claim 1 wherein R<sub>1</sub> is halogen, optionally substituted C<sub>1</sub>-C<sub>3</sub>alkyl or C<sub>2</sub>-C<sub>3</sub>alkenyl, or -NR<sub>6</sub>R<sub>7</sub>, -OR<sub>8</sub>, -SR<sub>9</sub> wherein R<sub>6</sub> is H or optionally substituted C<sub>1</sub>-C<sub>3</sub>alkyl, and R<sub>7</sub>, R<sub>8</sub>, and R<sub>9</sub> are C<sub>1</sub>-C<sub>3</sub>alkyl, or R<sub>6</sub> and R<sub>7</sub> together form a 5 or 6-membered heterocyclic ring.

3. The use as claimed in claim 1 wherein R<sub>1</sub> is methyl, ethyl, n- or iso-propyl, trifluoromethyl, allyl, cyclopropyl, chloro, bromo or fluoro.

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4. The use as claimed in claim 1 wherein  $R_1$  is  $-NR_6R_7$ ,  $-OR_8$ ,  $-SR_9$  wherein  $R_6$  is hydrogen, methyl, ethyl, n- or iso-propyl, trifluoromethyl, or allyl;  $R_7$  is methyl, ethyl, n- or iso-propyl;  $R_8$  and  $R_9$  are methyl, ethyl, n- or iso-propyl, trifluoromethyl or allyl.
- 5 5. The use as claimed in claim 1 wherein  $R_1$  is  $-NHCH_3$ .
6. The use as claimed in any of the preceding claims wherein  $R_2$  is optionally substituted phenyl.
- 10 7. The use as claimed in any of claims 1 to 5 wherein  $R_2$  is optionally substituted monocyclic or bicyclic heteroaryl.
8. The use as claimed in any of claims 1 to 5 wherein  $R_2$  is optionally substituted furyl, thienyl, thiazolyl, oxazolyl, imidazolyl, pyridyl, indolyl or benzofuranyl.
- 15 9. The use as claimed in any of the preceding claims wherein optional substituents present in  $R_2$  are selected from  $C_1$ - $C_3$  alkyl,  $C_1$ - $C_3$  alkoxy, chloro, bromo, fluoro, trifluoromethyl, and carboxamide groups.
- 20 10. The use as claimed in any of claims 1 to 8 wherein optional substituents present in  $R_2$  are selected from methyl, ethyl, methoxy, ethoxy, cyclopropyl, chloro, bromo, fluoro, trifluoromethyl, and carboxamide groups  $-CONR^A R^B$  where  $R^A$  and  $R^B$  are independently hydrogen, methyl or ethyl.
- 25 11. The use as claimed in any of claims 1 to 5 wherein  $R_2$  is 2-furyl, 5-methyl-2-furyl, 2-thiazolyl, 4-methyl-2-thiazolyl, phenyl, or o-methyl-phenyl.
12. The use as claimed in any of the preceding claims wherein  $R_3$  is H,  $C_1$ - $C_6$ alkyl,  $C_3$ - $C_6$ cycloalkyl, halo substituted  $C_1$ - $C_6$ alkyl, or halogen.
- 30 13. The use as claimed in any of claims 1 to 11 wherein  $R_3$  is H, methyl, ethyl, n- or isopropyl, cyclopropyl, n-, sec- or tert-butyl, trifluoromethyl, chloro, bromo or fluoro.
14. The use as claimed in any of the preceding claims wherein  $R_4$  is  $C_1$ - $C_6$ alkyl, substituted by aryl or heteroaryl, the said aryl or heteroaryl ring being optionally substituted.
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15. The use as claimed in any of claims 1 to 13 wherein  $R_4$  is arylmethyl or heteroarylmethyl, the said aryl or heteroaryl ring being optionally substituted.
- 5 16. The use as claimed in any of the preceding claims wherein  $R_4$  is aryl or heteroaryl or includes an aryl or heteroaryl ring, said ring being selected from optionally substituted phenyl, pyridyl, furanyl, thienyl, isoxazolyl, thiazolyl, pyrrolyl, imidazolyl, pyrazolyl, pyrazinyl, pyrimidinyl, benzimidazolyl, indolyl, benzthiazolyl, benzthiadiazolyl, quinolyl, and isoquinolyl.
- 10 17. The use as claimed in any of claims 1 to 13 wherein  $R_4$  is aryl or heteroaryl or includes an aryl or heteroaryl ring, said ring being selected from optionally substituted phenyl, pyridyl, imidazolyl, pyrazolyl, and isoxazolyl.
- 15 18. The use as claimed in any of claims 14 to 17 wherein optional substituents are selected from  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_3$  alkoxy, chloro, bromo, fluoro, trifluoromethyl,  $-NR^A R^B$ ,  $-CONR^A R^B$ ,  $-NR^A COR^B$  where  $R^A$  and  $R^B$  are independently hydrogen or  $C_1$ - $C_3$  alkyl or together form an optionally substituted 5 or 6-membered heterocyclic ring.
- 20 19. The use as claimed in any of the preceding claims wherein  $R_5$  is hydrogen.
20. The use as claimed in any of claims 1 to 13 wherein  $R_4$  and  $R_5$  taken together with the nitrogen to which they are attached form a saturated 5 or 6-membered heterocyclic ring, optionally benz-fused.
- 25 21. The use as claimed in any of claims 1 to 13 wherein  $R_4$  and  $R_5$  taken together with the nitrogen to which they are attached form a dihydroindolyl, dihydroisoindolyl, tetrahydroquinolyl or tetrahydroisoquinolyl ring system.
- 30 22. A method of treating or preventing a disorder in which the blocking of purine receptors is beneficial, the method comprising administration to a subject in need of such treatment an effective dose of a compound of formula (I) as set out in any of claims 1 to 17 or a pharmaceutically acceptable salt or prodrug thereof.
- 35 23. A compound of formula (I) as defined in any of claims 1 to 21, wherein  $R_2$  is optionally substituted 5-membered heteroaryl.

24. A compound as claimed in claim 23 wherein the compound is selected from any of the compounds as shown in Table 1.
- 5 25. For use in therapy a compound as claimed in claims 23 or 24.
26. A pharmaceutical composition comprising a compound as claimed in claim 23 or claim 24 in combination with a pharmaceutically acceptable carrier or excipients.
- 10 27. A use as claimed in any of claims 1 to 21 or a method as claimed in claim 22 wherein said receptors are adenosine receptors.
28. A use as claimed in any of claims 1 to 21 or a method as claimed in claim 22 wherein said receptors are adenosine  $A_{2A}$  receptors.
- 15 29. A use as claimed in any of claims 1 to 21 or a method as claimed in claim 22 wherein the disorders are selected from movement disorders; anxiety disorders, affective disorders; central and peripheral nervous system degenerative disorders; schizophrenia; cognitive and memory impairment disorders; attention disorders; central nervous system
- 20 injury; cerebral ischaemia; myocardial ischaemia; muscle ischaemia; sleep disorders; eye disorders; cardiovascular disorders; and diabetes.
30. A use or method as claimed in claim 29 wherein the movement disorder is selected from Parkinson's disease, progressive supranuclear palsy, Huntingtons disease,
- 25 multiple system atrophy, corticobasal degeneration, Wilsons disease, Hallerorden-Spatz disease, progressive pallidal atrophy, Dopa-responsive dystonia-Parkinsonism and spasticity.
31. A use or method as claimed in claim 29 or claim 30, wherein the disorder is a
- 30 movement disorder and the compound of formula (I) is used or administered together with L-DOPA or a dopamine agonist.
32. A use or method as claimed in claim 29 wherein the anxiety disorder is selected from panic disorder, agoraphobia, obsessive compulsive disorder, social phobia, post
- 35 traumatic stress disorder, generalised anxiety disorder and specific phobia.

33. A use or method as claimed in claim 29 wherein said affective disorder is selected from bipolar disorder, seasonal affective disorder, depression, manic depression, atypical depression and monodepressive disease.

5 34. A use or method as claimed in claim 29 wherein said central and peripheral nervous system degenerative disorder is selected from corticobasal degeneration, demyelinating disease, Freidrich's ataxia, motoneurone disease, multiple system atrophy, myelopathy, radiculopathy, peripheral neuropathy, systemic lupus erythamatosi,  
10 granulomatous disease, olivo-ponto-cerebellar atrophy, progressive pallidal atrophy, progressive supranuclear palsy and spasticity.

35. A use or method as claimed in claim 29 wherein said cognitive and/or memory impairment disorder is selected from dementia, Alzheimers Disease, Frontotemporal dementia, multi-infarct dementia, AIDS dementia, dementia associated with Huntingtons  
15 Disease, Lewy body dementia, senile dementia, age-related memory impairment, cognitive impairment associated with dementia, Korsakoff syndrome, dementia pugilans;

36. A use or method as claimed in claim 29 wherein attention disorder is selected from attention-deficit hyperactivity disorder (ADHD), attention deficit disorder, minimal brain  
20 dysfunction, brain-injured child syndrome, hyperkinetic reaction childhood and hyperactive child syndrome.

37. A use or method as claimed in claim 29 wherein said central nervous system injury is selected from traumatic brain injury, surgical trauma, raised intracranial pressure,  
25 cerebral oedema, hydrocephalus and spinal cord injury.

38. A use or method as claimed in claim 29 wherein said cerebral ischaemia is transient ischaemic attack, stroke, subarachnoid haemorrhage, cerebral vasospasm, perinatal asphyxia, drowning, cardiac arrest or subdural haematoma.

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39. A use or method as claimed in claim 29 wherein the sleep disorder is selected from hypersomnia, narcolepsy and restless legs syndrome.

40. A use or method as claimed in claim 29 wherein the eye disorder is selected from retinal ischaemia-reperfusion injury and diabetic neuropathy.
- 5 41. Use of a compound of formula (I) or a pharmaceutically acceptable salt or prodrug thereof as set forth in any of claims 1 to 21 in the manufacture of a medicament for neuroprotection in a subject.
42. A method of neuroprotection comprising administration to a subject in need of  
10 such treatment an effective dose of a compound of formula (I) as set out in any of claims 1 to 21 or a pharmaceutically acceptable salt or prodrug thereof.